This DRAFT Docket has been prepared for the purposes of the scheduled public hearing and may be substantially modified as a result of the public hearing process prior to Commission action.

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DOCKET NO. D-1990-074 CP-4

DELAWARE RIVER BASIN COMMISSION

Gloucester County Utilities Authority
Wastewater Treatment Plant
West Deptford Township, Gloucester County, New Jersey

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by Remington & Vernick Engineers on behalf of the Gloucester County Utilities Authority (GCUA or docket holder) on January 16, 2013 (Application), for renewal of an existing wastewater treatment plant (WWTP), as well as approval for an increased heat dissipation area and total dissolved solids (TDS) mixing zone. New Jersey Pollutant Discharge Elimination System (NJPDES) Permit No. NJ0024686 for this project was issued by the New Jersey Department of Environmental Protection (NJDEP) on May 12, 2010, effective July 1, 2010, and last amended on November 12, 2010, effective January 1, 2011.

The Application was reviewed for continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Gloucester County Planning Board has been notified of pending action. A public hearing on this project was held by the DRBC on May 7, 2013.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew approval of the existing 27 million gallons per day (mgd) GCUA WWTP and its related discharge. This docket also approves a TDS Determination which provides for an increase in its TDS effluent concentration from 1,000 mg/l to 1,250 mg/l at Outfall No. DSN001A and an increase in the heat dissipation area and TDS mixing zone centered on Outfall No. DSN004A.

2. Location. The existing GCUA WWTP will continue to discharge treated effluent to Water Quality Zone 4 of the tidal Delaware River at River Mile 89.7 via Outfall No. DSN004A, in West Deptford Township, Gloucester County, New Jersey as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
DSN004A	39° 51’ 10”	75° 13’ 32.1”

3. **Area Served**. The docket holder's WWTP receives wastewater flows from Clayton Borough, Deptford Township, Borough of Glassboro, Mantua Township, Borough of Paulsboro, Monroe Township, Borough of Wenonah, National Park Borough, Washington Township, Borough of Pittman, Township of West Deptford, Borough of Westville, City of Woodbury, and Woodbury Heights Borough, all in Gloucester County, New Jersey. Additionally, wastewater from the West Deptford Energy Station (WDES) is received by the docket holder's effluent stream (location C in Fig. 1), prior to discharge to the Delaware River via outfall DSN004A.

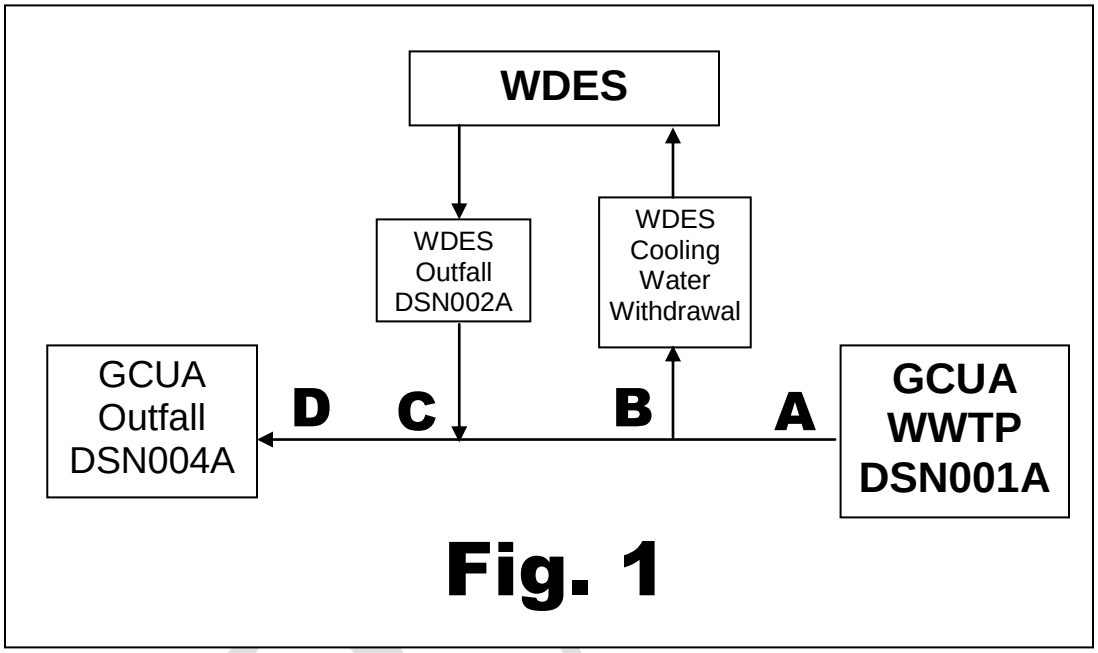

Fig. 1

Approximately 0.1 mgd is hauled to the WWTP as septage, typically from within the Delaware River Basin (DRB). The WWTP will continue to serve a portion of Monroe Township, which is partly out of the DRB. The amount of flow imported from the Atlantic Basin is approximately 1.5 mgd.

For the purpose of defining the Area Served, Section B (Type of Discharge) and D (Service Area) of the docket holder's Application are incorporated herein by reference, to the extent consistent with all other conditions contained in the DECISION Section of this docket.

4. **Physical features**.

a. **Design criteria**. The 27 mgd WWTP treats municipal and industrial wastewater principally via a plug-flow activated sludge process. The WWTP must be periodically operated in complete mix and contact stabilization modes in order to optimize efficiency and meet NJPDES Permit limits. Additional aeration is used to handle peak flow conditions during periods of nitrification. The plug-flow mode of operation is generally used in the spring and summer, while re-aeration is typically more efficient in the winter. Following secondary clarification and disinfection, GCUA effluent is discharged into a 6,025 foot long pipe, at

location A in Fig.1 above, that eventually discharges to the Delaware River via Outfall No. DSN004A.

b. Facilities. The WWTP consists of bar screens, an aerated grit chamber, two primary clarifiers, six activated sludge tanks with fine bubble air diffusers, four secondary clarifiers, a sodium hypochlorite disinfection system, a sludge thickening tank, a sludge blending tank, three belt filter presses, and a sludge incinerator.

The GCUA WWTP is not located in the 100-year floodplain.

Emergency power is available for use during an electrical power outage.

c. Water withdrawals. The potable water supply in the project service area is provided by individual on-lot wells or by the New Jersey American Water Company (NJAWC).

d. NJPDES Permit / DRBC Docket. NJPDES Permit No. NJ0024686 was modified by the NJDEP on November 12, 2010 (effective January 1, 2011) and includes final effluent limitations for the project discharge of 27 mgd to surface waters classified by the NJDEP as Mainstem Delaware Zone 4. The following average monthly effluent limits are among those listed in the NJPDES Permit and meet or are more stringent than the effluent requirements of the DRBC.

The DRBC effluent limits provided to GCUA in EFFLUENT TABLEs A-1 and A-2 (location A, Fig. 1 above) are based on its 27 mgd average design discharge. Additionally, EFFLUENT TABLE A-3 provides monitoring and reporting requirements for the combined GCUA and WDES effluent measured at Outfall No. DSN004A (location D, Fig. 1 above) prior to discharge to the Delaware River. The monitoring and reporting requirements at Outfall DSN004A become effective upon initiation of operations at the WDES.

EFFLUENT TABLE A-1: DRBC Parameters Included in NJPDES Permit

Outfall No. DSN001A (At discharge from GCUA WWTP)		
PARAMETER	**LIMIT**	**MONITORING**
pH (Standard Units)	6 to 9 at all times	As required by NJPDES permit
Total Suspended Solids (@ Q < 24.1 mgd) Total Suspended Solids (@ Q > 24.1 mgd)	30 mg/l 27 mg/l	As required by NJPDES permit
CBOD (5-Day at 20^{o} C) (@ Q < 24.1 mgd) CBOD (5-Day at 20^{o} C) (@ Q > 24.1 mgd)	25 mg/l (89.85% minimum removal*, 4,725 lbs/day) 21 mg/l (89.85% minimum removal*, 4,725 lbs/day)	As required by NJPDES permit
Ammonia Nitrogen	35 mg/l	As required by NJPDES permit
Fecal Coliform	200 colonies per 100 ml	As required by NJPDES permit
Acute Toxicity	78 % Effluent	As required by NJPDES permit
Chronic Toxicity*	Monitor & Report**	As required by NJPDES permit

* DRBC Requirement

** See DECISION Condition II.i.

EFFLUENT TABLE A-2: DRBC Parameters Not Included in NJPDES Permit

Outfall No. DSN001A (At discharge from GCUA WWTP)		
PARAMETER	**LIMIT**	**MONITORING**
Total Dissolved Solids*	1,250 mg/l (daily maximum) *	Monthly ***
$CBOD_{20}$*	8,500 lbs/day *	Monthly *

* DRBC Requirement

*** See DECISION Conditions II.j. & II.v.

EFFLUENT TABLE A-3: Monitoring and Reporting Requirements

OUTFALL DSN004A (Delaware River Outfall)		
PARAMETER	**LIMIT**	**MONITORING**
Total Dissolved Solids*	Monitor & Report*	Monthly ***
Toxicity (Chronic & Acute)**	Monitor & Report**	Same as Internal Discharge *
Temperature*	Monitor & Report*	Monthly ****

* DRBC Requirement

** See DECISION Condition II.i.

*** See DECISION Conditions II.j. & II.v.

**** See DECISION Condition II.h.

e. Cost. Construction costs associated with installing monitoring equipment at Outfall No. DSN004A are expected to be nominal.

f. Relationship to the Comprehensive Plan. The GCUA WWTP was included in the Comprehensive Plan upon approval of Docket No. D-68-84 CP on August 27, 1969. Expansions of the GCUA WWTP were approved via Dockets Nos. D-78-34 CP, D-86-43 CP, D-90-74 CP, and D-1990-074 CP-2 on June 28, 1978, October 28, 1986, January 20, 1993, and May 10, 2006, respectively. The 27 mgd WWTP was continued in the Comprehensive Plan upon approval of Docket No. D-1990-074 CP-3 on December 9, 2009. Issuance of this docket will continue approval of the 27 mgd GCUA WWTP in the Comprehensive Plan (See DECISION Condition I.c.).

B. BACKGROUND

On May 6, 2009, the DRBC approved Docket No. D-2008-27-1 providing for the withdrawal by the WDES of up to 7.5 mgd from the GCUA outfall pipeline (location B, Fig. 1 above) and the return discharge of approximately 2 mgd of wastewater back into the GCUA effluent pipeline (location C, Fig. 1 above). As is depicted in Fig. 1 above, effluent from WDES will be reintroduced into the effluent pipeline prior to the combined discharge to the Delaware River. The combined outfall is owned and operated by GCUA and therefore Dockets No. D- D-1990-074 CP-3 was issued requiring monitoring at several locations instead of just location A from Fig. 1. To date, the WDES has not been fully constructed and therefore is not operational.

Due to the need to meet new NJDEP water quality requirements, reverse osmosis (RO) treatment is being installed on multiple water treatment systems in the docket holder's service

area. The discharge of the RO wastewater to the GCUA system will result in higher TDS concentrations from the GCUA WWTP.

C. FINDINGS

The purpose of this docket is to renew approval of the existing 27 mgd GCUA WWTP and its related discharge. This docket also approves a TDS Determination which provides for an increase in its TDS effluent concentration from 1,000 mg/l to 1,250 mg/l at Outfall No. DSN001A and an increase in the heat dissipation area and TDS mixing zone centered on Outfall No. DSN004A.

Toxicity

Water Quality Zone 4 stream quality objectives exist for toxic pollutants. They include criteria to protect the taste and odor of ingested water and fish (Table 4 of DRBC's Water Quality Regulations (WQR)), to protect aquatic life (Table 5), and to protect human health (Tables 6 & 7). Toxicity in effluent is measured as Whole Effluent Toxicity (WET), and results from both acute and chronic exposures. The acute toxicity stream quality objective for Zone 4 is 0.3 Toxic Units (TUa = 0.3). The chronic toxicity stream quality objective for Water Quality Zone 4 is 1.0 Toxic Units (TUc = 1.0). Since toxicity can't be measured linearly, the docket holder shall perform WET testing at locations A and D (Fig. 1).

Chronic Toxicity

The chronic toxicity results must be reported as No Observed Effect Concentration (NOEC) and Chronic Toxic Units (TUc) with a Percent Minimum Significant Difference (PMSD) reported. The results shall also be reported as Inhibitory Concentration, 25 percent (IC_{25}). The testing should follow USEPA guidance on Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA 821-R-02-013, 4th Ed, 2002).

The docket holder is required to perform semi-annual WET tests to generate chronic toxicity data on the fathead minnow (*Pimephales promelas).* Samples shall be taken concurrently with acute samples to develop a correlation. Results shall be submitted to the Commission annually with the report required in DECISION Condition II.d. of this docket.

Acute Toxicity

The docket holder is required to perform WET tests to generate acute toxicity data on the fathead minnow (*Pimephales promelas)* as part of their existing NJPDES Permit. This data shall be provided to the DRBC for review.

WDES has been required to monitor for both Acute Toxicity and Chronic Toxicity at internal Monitoring Point No. DSN002A semi-annually. All samples are to be taken semi-annually in conjunction with GCUA samples (Outfalls Nos. DSN001A and DSN004A).

All WET sampling from WDES and GCUA is to be coordinated to ensure that sampling is conducted by WDES and GCUA on the same day (See DECISION Condition II.i.).

The acute results shall be reported as a 48-hour and 96-hour lethal concentration (LC_{50}) and TUa. The testing should follow USEPA guidance on Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA 821-R-02-012, 5th Ed, October 2002) or equivalent New Jersey guidance on effluent limits.

The docket holder has been informed that acute toxicity test results are already approaching the NJDEP NJPDES Permit limit of 1.28 TUa (78% Effluent). The TDS variance approved in this docket is expected to potentially increase acute toxicity, especially after comingling with the effluent from WDES. If the docket holder experiences such results, modifications to the docket holder's discharge configuration will need to be analyzed prior to Commission consideration for an alternative mixing zone in the future. The docket holder was informed of the acute toxicity levels approaching their existing limit and their potential to modify the outfall configuration at a March 27, 2013 meeting held at the DRBC.

Total Dissolved Solids (TDS)

The Commission's basin-wide TDS effluent limit is 1,000 mg/l (Section 3.10.4D.2. of the Commission's WQR). In addition, the Commission's basin-wide in-stream TDS requirements provide the analysis of the instream conditions after the introduction of the project's effluent discharge demonstrate that 1) the receiving stream's resultant TDS concentration be less than 133% of the background (Section 3.10.3B.1.b. of the Commission's WQR) and the receiving stream's resultant TDS concentration be less than 500 mg/l (Section 3.10.3B.2. of the Commission's WQR).

The 133% of the background TDS requirement is for the protection of aquatic life. The 500 mg/l TDS requirement is to protect the use of the receiving stream as a drinking water source. The EPA's Safe Drinking Water Act's secondary standard for TDS is 500 mg/l.

Water Quality Zone 4 stream quality objectives do not explicitly include the designated use of water for public drinking water supplies. As a consequence, the Commission finds that the 500 mg/l basin-wide TDS requirement is not always applied in Water Quality Zone 4. The Commission reserves the right, in accordance with the WQR and the *Rules of Practice and Procedure*, to apply the 500 mg/l basin-wide TDS requirement in Water Quality Zone 4 when and where it determines that the requirements are necessary to protect water uses in Water Quality Zone 4.

The in-stream 500 mg/l basin-wide TDS requirement was not applied to the combined discharge, however the 133% requirement was applied because of the discharge's location several miles above the usual salinity line (250 mg/l chlorides) of the Estuary. There are no public water supply intakes located on the Delaware River within 5 miles of the project discharge.

Background TDS is the observed concentration of TDS during low flow conditions (Q_{7-10}) or, in the absence thereof, an estimate acceptable to the Commission (Section 3.10.6G. of the Commission's WQR). Observed TDS concentrations from the Delaware Estuary, years from

2000 to 2005 were provided by DRBC staff and the impact of effluent is evaluated at various quantities.

WDE submitted a TDS determination request to supplement their docket application for Docket No. D-2008-27-1 in August 2008. WDE provided a document for CORMIX model run analyses in September 2008 and a document responding to Commission staff's comments on November 25, 2008. Background TDS concentrations vary from 130.5 mg/l to 519.5 mg/l (at 25^{th} and 95^{th} percentile) based upon hydrologic and astronomical tidal conditions near River Mile 90 (where the combined GCUA and WDES effluent discharge is located). The high background TDS condition is reasonably assumed to occur during low flow conditions. Therefore, the 95^{th} percentile value, or 519.5 mg/l of TDS was used for background TDS concentration around river mile 90.

The estimated **daily maximum** TDS concentration for the combined effluent in 2008 was 1,400 mg/l requiring a dilution factor of 5.1 to meet the 133% of background TDS concentration of 519.5 mg/l. The Commission's WQRs do not specifically provide criteria to evaluate TDS mixing zones, however, Section 4.20.5A.1.a of the Commission's WQR provides criteria for the evaluation of acute toxicity mixing zones. Based on CORMIX model runs, a dilution factor of 5.1 can be achieved within a guideline acute toxicity mixing zone. The guideline acute toxicity mixing zone is defined as the more stringent of the following restrictions:

- A distance of 50 times the discharge length scale in any direction from the outfall structure, or
- A distance of 5 times the local water depth in any direction from the outfall structure.

The guideline acute toxicity mixing zone criteria for Outfall No. DSN004A was used to evaluate TDS at that time and the second restriction (a distance of 5 times the local water depth) was found most limiting. The result was a TDS mixing zone of 32 meters (105 feet) around Outfall No. DSN004A. Model runs demonstrated that the combined effluent with daily maximum TDS concentration of 1,400 mg/l would not cause an exceedance of 133% of background at the edge of a 32 meter radius mixing zone centered on Outfall No. DSN004A.

Due to an increase in TDS concentrations expected as a result of Reverse Osmosis (RO) reject water conveyed to the docket holder's WWTP from water systems within their service area, the docket holder has requested an increase in TDS for Outfalls Nos. DSN001A and DSN004A from 1,000 mg/l and 1,400 mg/l to 1,250 mg/l and 2,570 mg/l, respectively. As a result of this increased TDS concentration in the effluent as well as operational flexibility at the WDES, the WDES will need to withdraw and discharge more water (locations B & C, Fig. 1 above) from/to the GCUA effluent pipeline. The TDS concentration in the WDES discharge will increase from 4,200 mg/l to 5,000 mg/l. Using the acute toxicity guidelines as was performed in Docket No. D-1990-074 CP-3, the resulting TDS mixing zone centered on Outfall No. DSN004A is 1,561 feet in length (844 feet upstream and 717 feet downstream) by 217 feet wide when WDE operates at three cycles.

In summary, this docket approves a variance to the Commission's 1,000 mg/l basin-wide TDS effluent limit of 1,250 mg/l at Outfall No. DSN001A (location A, Fig.1). Additionally, this docket approves a TDS mixing zone of 1,561 feet in length (844 feet upstream and 717 feet downstream) by 217 feet wide centered on Outfall No. DSN004A (See DECISION Conditions II.j. and II.v.).

Heat Dissipation Area

Section 4.30.6.C. of the Commission's WQR require that discharges to Water Quality Zone 4 shall not result in an induced temperature increase of 5^{o}F (2.8^{o}C) above the average 24-hour temperature gradient displayed during the 1961-1966 period, or a maximum of 86^{o}F (30.0^{o}C), whichever is less.

WDES evaluated the impact of a combined GCUA and WDES discharge of up to 21.5 mgd from Outfall No. DSN004A as part of Docket Application No. D-2008-27-1. As part of its applications to NJDEP and DRBC, WDES requested a 164' radial heat dissipation area be approved at Outfall No. DSN004A for the combined effluent to meet the DRBC heat dissipation area requirements for Water Quality Zone 4.

Section 4.30.6F.3. of the Commission's WQR allows for heat dissipation areas up to 3,500 feet in length. WDES provided data to DRBC that supported a determination that under the 1961-1966 conditions, a thermal mixing zone need not be larger than 164'. The WDES requested a 164' radial thermal mixing zone (with a 4.1 dilution) be applied at Outfall No. DSN004A to ensure that ambient temperature does not exceed the 2.8^{o}C increase throughout the tidal cycle. The DRBC staff determined that a 164' radial heat dissipation area centered around GCUA Outfall No. DSN004A conformed with the Commission's WQR (See DECISION Condition II.h. of Docket No. D-2008-27-1).

Due to the increased water withdrawal and discharge flow required by WDES because of higher TDS concentrations discharged from GCUA's WWTP and operational flexibility requested by WDE, temperature at Outfall No. DSN004A is expected to be higher than originally modeled in 2008. The docket holder supplied Commission staff with revised CORMIX modeling work that supports a new heat dissipation area of 994 feet (361 feet upstream and 633 feet downstream) by 144 feet wide centered on Outfall No. DSN004A. The new dilution factor was calculated to be 5.9 to 1. The heat dissipation area is primarily needed in the winter when in-stream temperatures are lower. The model predicted that effluent from Outfall No. DSN004A would have a temperature near 27^{o}C at that time, warranting the heat dissipation area. The effluent limit of 34^{o}C in this docket is for warmer seasonal discharges and the model predicted that in-stream temperatures would be such that a heat dissipation area would not be required at such a time. DRBC staff have determined that the new heat dissipation area will conform with the Commission's WQR and recommend its approval (See DECISION Condition II.h.).

$CBOD_{20}$ Wasteload Allocation

The Commission's WQR provide for the allocation of the stream assimilative capacity where waste discharges would otherwise result in exceeding such capacity. It was determined in the 1960's that discharges to the Delaware Estuary be limited to a total of 322,000 lbs/day of carbonaceous biochemical (first stage) oxygen demand ($CBOD_{20}$). In accordance with the Regulations, the assimilative capacity of each Delaware Estuary zone minus a reserve was originally allocated in 1968 among the individual dischargers based upon the concept of uniform reduction of raw waste in a zone (Zones 2, 3, 4 and 5). The totals and percent reduction for each zone are given in Table 1 of the Commission's *Status of CBOD20 Wasteload Allocations* (Revised October 1, 2000). The combined GCUA and WDES outfall is located in Water Quality Zone 4 at river mile 89.7. Water Quality Zone 4 has a reserve capacity of ~26%.

$CBOD_{20}$ Allocation History

A letter from the Executive Director on February 19, 1970 approved an allocation of 2,830 lbs/day of $CBOD_{20}$.

Docket No. D-1990-074 CP-2 approved an allocation of 4,320 lbs/day of $CBOD_{20}$ on June 28, 1978.

A letter from the Executive Director on December 8, 1992 approved an allocation of 7,000 lbs/day of $CBOD_{20}$ (3,900 lbs/day of BOD_5). That allocation was renewed in Docket No. D-90-74 CP, approved on January 20, 1993.

A letter from the Executive Director on September 21, 1998 approved an allocation of 8,200 lbs/day of $CBOD_{20}$ (4,575 lbs/day of BOD_5).

Docket No. D-1990-074 CP-2 approved an allocation of 8,500 lbs/day of $CBOD_{20}$ (4,725 lbs/day of BOD_5) on May 10, 2006.

Docket No. D-1990-074 CP-3 continued approval of an allocation of 8,500 lbs/day of $CBOD_{20}$ (4,725 lbs/day of BOD_5) on December 9, 2009.

$CBOD_{20}$ Determination

DMR data submitted by the docket holder continues to support the allocation of 8,500 lbs/day $CBOD_{20}$ for the existing 27 mgd WWTP and therefore Commission staff have recommended its continuance.

Other

At the project discharge site, the Delaware River is tidal and its flow is regulated by upstream reservoir releases. The Trenton low flow target is 2,500 cfs (1.62 billion gallons per day). The addition of the tidal tributaries upstream of the discharge location at their Q7-10 flow

and the low flow Trenton target results in a low-flow of approximately 4,318 cfs (2.79 billion gallons per day) for the Delaware River at the discharge location (River Mile 89.7).

The ratio of this low flow to the hydraulic design of the 27 mgd GCUA WWTP is 103.3 to 1.

GCUA currently monitors its effluent at the point where it leaves the WWTP (location A, Fig. 1), prior to the withdrawal and subsequent discharge from WDES. This docket also requires monitoring and reporting of the combined effluent at location D (Fig. 1). The docket holder shall make modifications as necessary to monitor the effluent at location D prior to the start of the WDES operations (See DECISION Condition II.l.). The docket holder shall submit written conformance of this requirement to the Executive Director and NJDEP prior to commencement of operation of the WDES.

There are no surface water intakes of record for public water supply downstream of the project discharge.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The limits in the NJPDES Permit are in compliance with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the Commission's *WQR*.

D. DECISION

I. Effective on the approval date for Docket No. D-1990-074 CP-4 below:

a. The project described in Docket No. D-1990-074 CP-3 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1990-074 CP-4; and

b. Docket No. D-1990-074 CP-3 is terminated and replaced by Docket No. D-1990-074 CP-4; and

c. The project and the appurtenant facilities described in Section A "Physical Features" of this docket shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in the Section A "Physical features" of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the NJDEP in its NJPDES Permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission's.

b. The facility and operational records shall be available at all times for inspection by the DRBC.

c. The facility shall be operated at all times to comply with the requirements of the Commission's *WQR*.

d. The docket holder shall comply with the requirements contained in the Effluent Table(s) in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results directly to the DRBC Project Review Section. The monitoring results shall be submitted annually, absent any observed limit violations, by January 31. If a DRBC effluent limit is violated, the docket holder shall submit the result(s) to the DRBC within 30 days of the violation(s) and provide a written explanation that states the action(s) the docket holder has taken to correct the violation(s) and protect against any future violations.

e. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

f. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

g. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

h. The discharge of wastewater shall not increase the ambient temperatures of the receiving waters by more than 5°F above the average 24-hour temperature gradient displayed during the 1961-1966 period, nor shall such discharge result in stream temperatures exceeding 86°F, except within an assigned heat dissipation area consisting of a 994 feet (361 feet upstream and 633 feet downstream) by 144 feet wide with a 5.9 to 1 dilution factor centered around Outfall No. DSN004A. Monthly temperature monitoring is required at Outfall No. DSN004A.

i. The docket holder shall monitor Acute Toxicity and Chronic Toxicity at Outfall No. DSN001A. When WDES initiates operations, the docket holder shall monitor Acute Toxicity and Chronic Toxicity at both Outfalls Nos. DSN001A and DSN004A. After 24 months of sampling at both locations, the docket holder may submit a written request for a modification of the toxicity monitoring to the Executive Director. The toxicity monitoring will continue as provided in this docket until the docket holder receives written approval from the Executive Director. The docket holder shall submit a summary of the first 24 months of toxicity monitoring results along with corresponding flow, specific conductivity, and TDS concentrations

(if available) to the DRBC (Project Review Section). The report shall be submitted no later than 30 months after the construction of WDES. All samples are to be taken semi-annually in conjunction with WDES (if operational) samples at Outfall No. DSN002A.

j. This docket approves a TDS mixing zone of 1,561 feet (844 feet upstream and 717 feet downstream) by 217 feet wide centered around Outfall No. DSN004A.

k. Sound practices of excavation, backfill and reseeding, as approved by the Gloucester County Soil Conservation District, shall be followed to minimize erosion and deposition of sediment in streams while installing monitoring equipment at Outfall DSN004A.

l. The docket holder shall make modifications as necessary to monitor effluent at locations A (DSN001A) and D (DSN004A) (from Fig. 1) prior to the start of the WDES operations. The docket holder shall submit written conformance of this requirement to the Executive Director and NJDEP prior to commencement of operation of the WDES.

m. This docket approval shall expire three years from date below unless prior thereto the docket holder has commenced installation of the monitoring equipment at Outfall No. DSN004A or has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

n. The docket holder is permitted to treat and discharge the categories of wastewaters defined in the "Area Served" section of this docket.

o. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

p. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

q. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

r. The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, in order to ensure proper control, use and management of the water resources of the Basin.

s. Unless an extension is requested and approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date

below (or the later date established by an extension that has been timely requested and approved), the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

t. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

u. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the Rules of Practice and Procedure. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

v. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.

w. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

BY THE COMMISSION

DATE APPROVED:

EXPIRATION DATE: June 30, 2015